

511, 875

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 October 2003 (30.10.2003)

PCT

(10) International Publication Number
WO 03/089620 A2

(51) International Patent Classification⁷: **C12N**

92078 (US). BARTON, Nelson [US/US]; 10928 Sunset Ridge Dr., San Diego, CA 92131 (US).

(21) International Application Number: **PCT/US03/12556**

(74) Agent: EINHORN, Gregory, P.; Fish & Richardson, P.C., Suite 500, 4350 La Jolla Village Drive, San Diego, CA 92122 (US).

(22) International Filing Date: 21 April 2003 (21.04.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(30) Priority Data:
60/374,313 19 April 2002 (19.04.2002) US

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 60/374,313 (CIP)
Filed on 19 April 2002 (19.04.2002)

(71) Applicant (*for all designated States except US*): DIVERSA CORPORATION [US/US]; 4955 Directors Place, San Diego, CA 92121 (US).

(72) Inventors; and

Published:

— without international search report and to be republished upon receipt of that report

(75) Inventors/Applicants (*for US only*): GRAMATIKOVA, Svetlana [BG/US]; 5709 Erlanger, San Diego, CA 92122 (US). HAZLEWOOD, Geoff [GB/US]; 13041 Caminito Bautizo, San Diego, CA 92130 (US). LAM, David [US/US]; 1671 Windemere Drive, San Elijo Hills, CA

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 03/089620 A2

(54) Title: PHOSPHOLIPASES, NUCLEIC ACIDS ENCODING THEM AND METHODS FOR MAKING AND USING THEM

(57) Abstract: The invention provides novel polypeptides having phospholipase activity, including, e.g., phospholipase A, B, C and D activity, patatin activity, lipid acyl hydrolase (LAH) activity, nucleic acids encoding them and antibodies that bind to them. Industrial methods, e.g., oil degumming, and products comprising use of these phospholipase are also provided.